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Based on a Ph.D. dissertation on an experiment involving the teaching of French with the widely used "Parlons francais" course to three groups of Grade 4 students, this article compares and evaluates the methods of staffing and implementing these FLES programs described in the report. The institutional approach methods assessed are--(1) Classroom Teacher and Television, (2) Specialist and Television, and (3) Classroom Teacher and 8 mm. Color-Sound Film. Included are analyses of cost and time factors and remarks about teacher and administrator satisfactions. Considerable attention is given to the staffing implications of this research. (AF)

Alternative Approaches to Staffing the Elementary Foreign Language Program: Cost and Time Vs. Achievement and Satisfaction

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IT HAS become a matter of national interest to increase the number of Americans who can understand and speak a foreign language. This shift of emphasis is paralleled by recent advances in linguistic science and allied fields which have contributed to a new view of language and language learning. In this view, understanding and speaking are regarded as primary objectives and sound bases for systematically acquiring reading and writing skills. The underlying observation is that understanding and speaking are largely a matter of habit, not knowledge. Within this approach, there is no need for educational prerequisites; therefore, foreign language instruction may begin earlier in the curriculum than has been customary—preferably in grades three or four.

The chief advantages of early instruction in a foreign language are greater ease in learning and a chance to develop near-native proficiency in pronunciation and intonation.¹ In the present world of instant communication, understanding one's neighbor who may speak another language is a necessity rather than a luxury.

This article evaluates and compares three methods of institutional approach to staffing the elementary foreign language program:

1. the classroom teacher and television;
2. the language specialist and television; and
3. the classroom teacher and color, sound 8mm motion picture films.

The problem for the administrator is one of weighing the alternatives of each approach in order to staff an elementary foreign language program that permits him to maximize results while minimizing costs. Although situations vary among school systems, alternative courses of action must be studied and outcomes must be identified. Each approach to staffing is scrutinized with respect to its inputs of time and cost and its outputs of achievement and satisfaction.

Methods 1 (Teacher and Television), 2 (Specialist and TV), and 3 (Teacher and Film) use identical program content—the *Parlons français* French course taught to over two million fourth, fifth, and sixth grade students in the continental United States and Canada.² Methods 1 and 2 receive two fifteen-minute televised lessons per week; films replace television in Method 3.

The population of each of the three groups consists of 340 fourth-grade students, seventeen (17) fourth-grade teachers, and seven (7) administrators. Administrators, teachers, and students completed forms which recorded their degrees of satisfaction with the specific teaching or learning situation in which they participated. The teachers also reported in minutes per week the amount of classroom time devoted to viewing the instructional program, the amount of preparation time devoted to the instructional program, and the amount of follow-up time devoted to supplementary activities. The Modern Language Project Level I French Test was administered simultaneously in each of the three school systems.³

¹ Wilder Penfield, a Canadian neurosurgeon, concludes that the specialized areas of the brain used in speaking are most plastic and receptive to language learning before adolescence. "A Consideration of the Neuro-Physiological Mechanisms of Speech and Some Educational Consequences" *Bulletin of the American Academy of Arts and Sciences*, VI, No. 51 (February, 1953).

² Distributed by D. C. Heath and Company, Boston, Massachusetts.

³ Approximately ten years ago the Council for Public Schools began to create materials which would bring a master foreign language teacher into the classroom through television or by sound motion pictures, together with all the necessary supplementary aids—manuals, workbooks, and recordings for both teacher and pupil. After spending over three million dollars on research development, trial and revision, such a program has been completed and circulated through the efforts of the Modern Language Project whose national committee is composed of leading language specialists in universities and school systems in more than twenty states.

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According to Figure 1, each alternative procedure yields corresponding institutional, teacher, and pupil responses to the instructional program. Institutional response encompasses program cost, administrator satisfaction, and class time. Teacher response includes teacher satisfaction, teacher preparation time, and

teacher follow-up time (time not including the reception of programmed lessons; i.e., viewing lessons, televised or filmed). Pupil response consists of student achievement and student satisfaction. An asterisk (*) indicates the most favorable results in each category.

FIGURE 1. ALTERNATIVE APPROACHES TO STAFFING THE ELEMENTARY FOREIGN LANGUAGE PROGRAM⁴

Method 1	Teacher TV	Institutional response	1. cost \$6.80 annual per pupil, 2. administrator satisfaction 3. class time	5 year, NDEA 57% 66 hours per year
		Teacher response	1. teacher satisfaction 2. preparation time 3. follow-up time	55% 38 hours per year 42 hours per year
		Pupil response	1. student achievement 2. student satisfaction	38% 52%
Method 2	Specialist TV	Institutional response	1. cost \$10.90 annual per pupil, *2. administrator satisfaction *3. class time	5 year, NDEA 88% 52 hours per year
		Teacher response	*1. teacher satisfaction *2. preparation time 3. follow-up time	87% 4 hours per year 28 hours per year
		Pupil response	*1. student achievement *2. student satisfaction	81% 87%
Method 3	Teacher Film	Institutional response	*1. cost \$3.10 annual per pupil, 2. administrator satisfaction 3. class time	5 year, NDEA 75% 59 hours per year
		Teacher response	1. teacher satisfaction 2. preparation time *3. follow-up	72% 24 hours per year 24 hours per year
		Pupil response	1. student achievement 2. student satisfaction	64% 70%

Characteristics of Method 1 (Teacher and TV)

1. Two twenty-minute instructional lessons of *Parlons français* are received weekly through the facilities of an educational television station.
2. Program manuals and records are provided for every classroom to aid the classroom teacher in conducting presentation and follow-up activities.
3. All lesson preparation and follow-up activities are planned and executed by the regular classroom teacher.
4. A language coordinator serves half time

in the administration of the elementary foreign language program.

(See Table I for a program and per-pupil cost analysis.)

Characteristics of Method 2 (Specialist and TV)

1. Two twenty-minute instructional lessons of *Parlons français* are received weekly through the facilities of an educational television station.

⁴ At the time at which the research was conducted, agreements were made with the school systems represented in Methods 1, 2, and 3 not to publicize the names of the school districts.

INPUTS

TABLE I

COMPARISON OF TOTAL ANNUAL COSTS FOR 340
FOURTH-GRADE PUPILS IN METHODS 1, 2, AND 3

COSTS	Method 1 (Teacher and TV)		Method 2 (Specialist and TV)		Method 3 (Teacher and Mark IV)	
	Total Costs	Net after NDEA 50%	Total Costs	Net after NDEA 50%	Total Costs	Net after NDEA 50%
Recurring costs:	\$1,150	1,150	305	305	410	410
Administrative (travel included)						
Test materials	150	150	0	0	0	0
French specialists at \$20 per day	0	0	3,400	3,400	0	0
Total recurring costs	\$2,300	2,300	3,705	3,705	410	410
Non-recurring costs:						
Materials—records	100	50	80	40	80	40
and manuals	140	70	100	50	100	50
2 Mark IV's						
1 set pupil films I teacher films	0	0	0	0	6,200	3,210
Total non-recurring costs	240	120	180	90	6,600	3,300
TOTALS	\$2,540	2,420	3,885	3,795	7,010	3,710
Total annual costs (rounded)						
One Year	\$2,500	2,400	3,900	3,800	7,000	3,700
Five years	2,350	2,300	3,750	3,700	1,700	1,050
Ten Years	2,350	2,300	3,750	3,700	1,100	750
Per-pupil annual costs						
One Year	7.35	7.05	11.50	11.20	20.60	10.90
Five Years	6.95	6.80	11.10	10.90	5.00	3.10
Ten Years	6.95	6.80	11.10	10.90	3.20	2.20

2. A bilingual teaching specialist visits each classroom three times weekly and conducts all follow-up activities.

3. A full-time language coordinator administers the elementary foreign language program.

(See Table 1 for a program and per-pupil cost analysis.)

Characteristics of Method 3 (Teacher and Film)

1. The Mark IV 8mm rear-vision cartridge-loading sound motion picture projector presents the content normally received through National Educational Television.

The film series is identical in content to the television series except that it is in color.

2. The regular classroom teacher projects the *Parlons français* course via films and records in each classroom.
3. Each teacher has the benefit of a series of teacher training films and recordings, and previews pupil films.
4. The classroom teacher is able to repeat and review films at her discretion.

(See Table I for a program and per-pupil cost analysis.)

Cost

The unit of comparison for program and per-pupil expenditures is 340 fourth-grade pupils or five elementary school buildings in each of the three school systems. This unit represents the area assigned to one team of language specialists in Method 2 and the number of elementary school buildings sharing pupil and teacher films in Method 3. Costs have been categorized as either recurring or non-recurring.

Recurring costs include annual expenditures for administration, test materials, and salaries of bilingual French specialists.

Non-recurring costs are funded through the National Defense Education Act and are incurred once. Expenditures in this area are for class records and manuals which have at least a five-year period of utility, and Mark IV 8mm rear-vision cartridge-loading sound motion picture projectors, teacher films and pupil films which have at least a ten-year period of utility when properly maintained.

Total annual costs have been rounded and extended to both a five-year and ten-year basis. Per-pupil annual costs are based on the rounded annual costs and are also extended to both a five-year and ten-year basis. Column costs are listed as "Total Costs" and "Net after NDEA 50%".

Costs: Method 1 (Teacher and TV)

Recurring costs. Administrative costs were high per pupil because of the extensive services required of the foreign language coordinator who allocates at least one-half time to the administration of the elementary foreign language instructional program. His responsibilities include supervising regular classroom teachers, planning and conducting in-service workshops after school, testing student achievement, and developing teacher follow-up activities.

Because of the variety and scope of other administrative duties, the foreign language coordinator must depend upon commercially-prepared testing materials and services, thus accounting for the high per-pupil expenditure for the testing program.

Non-recurring costs. One set of records and manuals is provided for every three classrooms.

Each classroom receives a broadcast of the *Parlons français* series every Tuesday and Thursday for thirty weeks during the school year. By rotating the time at which follow-up activities are presented, each classroom teacher has access to the records and manuals every Monday, Wednesday, and Friday.

Total costs. Because of a ratio of ten to one between recurring and non-recurring costs, Method 1 does not benefit much by extending the annual and per-pupil program expenditures over a five or ten year period.

Costs: Method 2 (Specialist and TV)

Recurring costs. The per-pupil administrative cost of Method 2 is the smallest of the methods compared because of the unusual competence of the bilingual French specialists who provide achievement testing programs and classroom enrichment activities to be conducted throughout the day by the regular classroom teachers. The latter activity provides for the extension of French usage so that common phrases and commands may be used during the entire school day.

Bilingual French specialists are screened before hiring by means of a battery of individually-administered audio-lingual proficiency tests. Specialists are not placed on the unified salary schedule; they usually receive \$4.00 per hour plus \$.08 per mile. Two twenty-minute classes are considered as equal to one hour. A teacher with the maximum of ten classes per day in two or three schools receives \$20.00 per day plus mileage. Specialists provide complete in-person coverage of all scheduled classroom learning activities.

Non-recurring costs. Each class receives a telecast of the *Parlons français* series every Tuesday and Thursday. Specialists conduct all follow-up activities on Monday, Wednesday and Friday. Two classrooms share each set of records and manuals. Classroom teachers prepare the class for the specialists by having records, manuals and student name plates ready.

Total costs. The ratio of twenty to one between recurring and non-recurring costs in Method 2 is even more prohibitive when extending annual

and per-pupil expenditures over a five or ten year period.

Costs: Method 3 (Teacher and Film)

Recurring costs. Expenditures for administrative services are rather small because of the flexibility in scheduling and using the Mark IV and films. Teachers are free to present and repeat lessons at their discretion, and they may preview lessons during free periods.

Test materials represent a minimal cost since students and teachers repeat the entire lesson film whenever reinforcement is desirable. Students are evaluated continually as film content is repeated and records and manuals are introduced to supplement filmed sequences.

Non-recurring costs. Since the film series is always available, one set of records and manuals is shared among four classrooms. Teachers indicate less need for records and manuals

since they are able to repeat films for student drill practice.

One Mark IV projector and one set of Level I pupil films are provided for each school building. Careful class scheduling makes it possible for each classroom teacher to use the equipment for at least five lessons weekly. Records and manuals are also available to each teacher for use in five classes per week.

The greatest advantage of the cartridge-film approach is that the teacher films provide for continuous, well-integrated teacher training. Fifteen teacher films include discussions of the nature and purpose of the teaching procedure.

Total costs. Whereas Methods 1 and 2 have recurring to non-recurring cost ratios of ten to one and twenty to one respectively, Method 3 has a ratio of one to fifteen; therefore, Method 3 has an excellent advantage when costs are extended over a five or ten year period.

TABLE II

INPUTS TIME	Method 1 (Teacher & TV)	Method 2 (Specialist & TV)	Method 3 (Teacher & Film)
<i>Hours per year</i>			
Class time —Viewing TV	24	24	0
—Viewing film	0	0	35
—Follow-up	42	28	24
Total class time	66	52	59
Teacher preparation time	38	4	24

Related Factors

Time. Since Methods 1 and 2 receive the same television broadcast schedule, identical amounts of class time are spent viewing lesson content. Teachers in Method 3 often repeat the pupil films for emphasis or drill. Although more time is spent in viewing lesson content, less class time is taken for follow-up activities. Follow-up activities command more class time in Method 1 since the regular classroom teacher may rely only on records and manuals to reinforce televised lesson content. The figure for follow-up time in Method 2 never varies

because of pre-established scheduled visitations by French specialists.

The greatest difference among methods 1, 2, and 3 occurs in the amount of teacher preparation time. It is difficult for the teacher in Method 1 to preview lesson content. She must, therefore, carefully study the teacher's manual in the hope of anticipating questions that may arise during the follow-up period. The teacher in Method 2 is not responsible for conducting follow-up activities. Her role is to prepare the class for the specialist by having the records,

manuals, and name plates ready. The classroom teacher in Method 3 spends most of her preparation time previewing pupil films and studying teacher films.

TABLE III

OUTPUTS SATISFACTION	Method 1 (Teacher & TV)	Method 2 (Specialist & TV)	Method 3 (Teacher & Film)
		Percentage Satisfaction	
Student	51.67%	86.67%	70.00%
Teacher	55.00	87.50	71.67
Administrator	56.67	88.33	75.00

Teacher satisfaction. Personal interviews with fourth-grade teachers in Method 1 partially clarified the nature of the observable comparative dissatisfaction.

Over seventy-five per cent (75%) of the teachers in Method 1 are teaching French without previous training in French or methods of teaching foreign language. They find it increasingly more difficult to correct errors in pronunciation and intonation and it is also difficult for them to direct the appropriate habit-forming practice needed to reinforce audio-lingual skills.

Teachers in Method 3 emphasize that the programming flexibility of the film and the inclusion of the teacher-training films make it possible for them to acquire adequate in-service training in listening and speaking skills. Teachers prepare for class by previewing the student lesson and consulting the teacher-training films. Previous lessons may be reviewed periodically in order to reinforce fundamental concepts.

Administrator Satisfaction. It is not surprising to find that administrators in Method 2 are more highly satisfied with the elementary foreign language program. The building princi-

pal is not primarily responsible for the language program. The foreign language coordinator schedules classes, requisitions equipment, and submits salary and travel vouchers for specialists.

The foreign language coordinator, in the role of a central office administrator, provides leadership and unity of direction and purpose for the elementary foreign language program. The objective of uniformity cannot be over-emphasized, for audio-lingual foreign language skills are among the most cumulative. Course articulation and program continuity can be achieved only if the authority for coordination rests with one person.

The testing procedure is entirely audio-visual. Instructions and questions are presented on records. Students are provided with a test booklet containing alternative pictures corresponding to each situation described on records. The Oral French Comprehension Test for Level I is designed by the Modern Language Project for use with its televised and film series of *Parlons français*. This instrument evaluates the students' ability to understand the spoken language, use it naturally in conversation, and approximate the pronunciation and intonation patterns of native speakers.

TABLE IV

OUTPUT ACHIEVEMENT	Method 1 (Teacher & TV)	Method 2 (Specialist & TV)	Method 3 (Teacher & Film)
		Percentage Achievement	
	38.06%	80.83%	64.17%

Implications

The implications of this research are presented with respect to staffing an exemplary or model program.

Implications for Staffing

When talking to school administrators about the possibility of implementing an elementary foreign language program in their district, the discussion ultimately revolves around the question of the possible sources of teaching personnel.

Regular elementary teachers who possess native or near-native pronunciation and intonation patterns are the first and most obvious source of supply. Unfortunately, in most areas of the United States, bilingual teachers are not available.

One of the most common sources of supply has been high-school foreign language teachers who have volunteered to teach in the elementary schools. This approach to staffing may be satisfactory for the small school district, but it is seldom a possibility for larger systems because of the relative scarcity of well-trained high-school foreign language teachers.

A number of experiments have been reported in the press in which parents or other members of the community have offered their services in order to launch an elementary foreign language program. How satisfactory, and particularly how durable, this approach has been remains to be determined. In any case, a community seriously interested in such a language program should canvass its members in a search for linguistic talent. Since the ultimate success of language experiments in the elementary school depends upon the interest and approval of the community, it is well to encourage the participation of interested and qualified community members who may serve as teachers' aides.

Foreign language teacher exchange programs offer an unlimited source of teachers about whose language qualifications there could be little doubt. However, there are obvious difficulties. The difference between foreign educational patterns and our own are infinitely greater than the differences between elementary-school and high-school patterns in our

own country. There is notably a tendency for a teacher in other countries to exercise an authority which would be unnatural in our classrooms. There must be the most careful kind of selection abroad by a bi-national committee so that only personalities that would seem to be adaptable would be chosen. There must also be an adequate period of orientation in this country during which the foreign language teacher works with American children and becomes accustomed to our educational system. In such exchanges, our teachers going abroad should undergo the same kind of screening and training.

Ultimately, specially trained teachers must be graduated from our own institutions of higher learning. If these colleges and universities are to take the place they should in the preparation of qualified language teachers for the elementary schools, they must do considerable retooling. A desirable objective would be to equip themselves to prepare language majors capable of speaking the target language with native or near-native competence, with a broad knowledge of the foreign culture pattern involved, and with a sound general education. It is doubtful that this goal can be accomplished in the near future; therefore, a compromise may be necessary—a foreign language major or minor should be available to teachers majoring in elementary education.

When expenditures of alternative instructional programs are compared, they should be extended over the life expectancy of program materials (records and manuals—five years) and equipment (projector, teacher and pupil films—ten years). If results of alternative procedures of staffing and implementing elementary foreign language educational programs are at all comparable, the instructional approach which has the most favorable balance of non-recurring over recurring costs should be chosen.

Expenditures might be concentrated in such a way that the instructional program provides for the maximum use of audio-visual lingual learning experiences. Such expenditures should lessen the extent to which the foreign language coordinator must develop tests and follow-up activities. If traveling language specialists are not used, the coordinator should be free to

supervise classroom teachers and conduct workshop sessions. It might be conjectured that classroom teachers charged with the responsibility of presenting lesson materials might develop greater competency if they are taught to plan and conduct their own follow-up activities. In this situation, it is suggested that the administration provide intensive workshops in order to accomplish this objective.

The elementary foreign language program as presented in Method 1 is clearly less satisfactory than that of Methods 2 and 3. The costs of this method are actually quite high and indefensible when compared to the costs and achievement of the other two procedures for staffing (Methods 2 and 3). If the regular classroom teachers are expected to coordinate daily learning activities, they could receive limited help from specialists who might visit at least every two weeks. The specialist should suggest follow-up activities and demonstrate these and other supplementary activities. As may be seen by reviewing the results of Method 1 in all categories, classroom teachers cannot adequately present and coordinate daily learning activities without regular help from trained language experts.

An alternative to employing specialists would be to equip each school with instructional media enabling each classroom teacher to preview and review lesson content at her convenience; provision must also be made for training the teacher in new foreign language skills and the methodology necessary to teach these skills effectively.

Teacher Satisfaction. The results of this research indicate that teacher satisfaction increases with the addition of more flexible media of presentation; satisfaction almost doubles with the addition of specialist help. Administrators must realize that it is unrealistic to ask teachers to conduct language classes, even in the elementary school, without flexible learning aids or specialist help. One of the most important responsibilities of the specialist who visits periodically is that of providing in-service training for classroom teachers.

Teacher Preparation Time. Workshop sessions are best when they approximate daily learning

situations. Teachers should be involved in planning workshop agendas and should teach demonstration lessons at the workshops. Participation must be active as possible. Effective workshops would lessen teacher preparation time significantly.

Teacher Follow-up Time. Some of the most critical problems that could be solved at workshop sessions are those of determining the extent of follow-up activities, the points that should be emphasized, and the method of presentation and evaluation. The teacher must incorporate the evaluation phase into every follow-up or supplementary activity. When possible, the teacher should state the lesson objective very clearly before each learning experience so that students see a purpose for the activity and identify with the goal of the lesson.

Student Achievement. Since foreign language learning stresses the mastery of cumulative audio-lingual skills, students must be given the opportunity to hear and speak the language as often as possible. Students may be more adept at acquiring pronunciation and intonation patterns if the teacher says as little as possible in English.

As the students progress, they could be required to answer questions and converse in the target language.

Student Satisfaction. Student satisfaction scores show that our elementary foreign language instructional programs tend to be rather boring for the very intelligent student.⁵ Perhaps this comes from the placing too much emphasis on mimicry-memorization skills for too long. Students seem to be more satisfied with the foreign language program when they have the opportunity to react extemporaneously to situations comparable to those presented in the model lesson.

Implications for the Establishment of an Exemplary Foreign Language Program

There are certain conclusions which lead to

⁵ Francis Richard Otto, *An Assessment of Three Approaches to Staffing and Implementing the Elementary*

the exemplary elementary foreign language program outlined in this study:

There is general agreement on the part of educators, and a declaration of policy by the Congress, that we as a nation should strive to develop a multi-lingual citizenry. It has been proved that an audio-lingual approach will lead to greater mastery of phonology than the traditional emphasis on translation, grammar and reading. The latter have their proper place but should be introduced after the pupil has acquired the ability to listen, understand, and speak.

It is generally agreed that the learning of a second language can more readily be attained by younger than by older children. It would, therefore, be desirable to start no higher than the fourth grade, and below if possible. The majority of the teachers of fourth, fifth and sixth grades in self-contained classrooms have little or no background in a foreign language. There is such an acute shortage of competent foreign language teaching specialists that if one

relied solely on them for instruction, no more than five to ten percent of the necessary number could be found. In certain areas where specialists are available, their salaries introduce a high enough recurring cost factor to be prohibitive for most school systems.

It follows that if there are to be foreign languages in the elementary schools (FLES), there are only two alternatives: either we postpone FLES for seven to ten years until teacher-training institutions introduce courses necessary to graduate FLES specialists, or we evolve some workable and not too costly technique for the in-service training of self-contained elementary classroom teachers who present flexible programmed lesson content with limited help from traveling specialists. Logically, we must choose the second alternative at this time.

Foreign Language Program, unpublished Ph.D. dissertation, University of Wisconsin, 1966. (Microfilm No. 66-9951) Pp. 150. \$3.00, microfilm; \$7.00, Xerox.

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